

Title:

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Capsule endoscopy: beyond the small bowel

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Dear Editor,

Obscure gastro-intestinal bleeding (OGIB) has been defined as a GI bleeding of unknown origin which persists after a negative first level endoscopy result (1). The majority of OGIBs originate from a lesion located in the small bowel, which is out of the reach of traditional endoscopy (1, 2).

Capsule endoscopy (CE) is considered the first-line for the investigation of OGIB after conventional non-diagnostic endoscopic examinations (3). A detection rate of lesions outside the small bowel segment has been reported to range from 3.5% to >30% (2, 4).

The goal of this retrospective, observational study was to analyze the role of capsule endoscopy in the identification of lesions outside the small bowel segment that have not been identified in conventional endoscopy in patients with suspected OGIB.

From January 2013 to December 2017, a total of 202 patients underwent the investigation of OGIB (table 1). In all these patients no significant mucosal lesions were detected at first level endoscopy. We considered as non-small-bowel lesions those outside the tract between the second duodenal portion and the ileocecal valve.

Patients were divided into two subgroups: occult OGIB (155 patients, 76.7%) and overt OGIB (47 patients, 23.3%). The cecum was reached in 93.6%. Capsule retention occurred in 3.4%. The average passage time in the small bowel was 4 hours and 28 minutes. CE demonstrated a probable diagnostic cause in 77.2% of patients.

CE revealed clinically significant lesions not identified on conventional endoscopy outside the small bowel segment in 46% of patients, of which 7.5% had active bleeding. The lesions most commonly found in the upper gastrointestinal tract were erosions (14.4%), polyps (5%) and angiodysplasias (4%). In the lower gastrointestinal tract, the most common lesions were angiodysplasia (8.9%) and polyps (2%).

This study confirms the efficiency and safety of CE in diagnosing patients with OGIB. Like previous studies, we obtained a high detection of non-small-bowel lesions, reinforcing that it may be appropriate to consider an endoscopic second look before performing a capsule endoscopy study, resulting in quicker diagnosis and considerable economic savings.

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Table 1A. Patient characteristics		Table 1B. Lesions detected on CE in patients with OGIB			Table 1C. . Detected lesions outside the SB		
	Total	Lesions	Occult (n=155)	Overt (n=47)	Lesions	Occult (n=81)	Overt (n=23)
n	202	Angiodysplasias	45 (29%)	22 (46.8%)	Angiodysplasias	22 (27.2%)	9 (39.1%)
Age (mean ± SD)	62,8 ± 15,5 (18-100y)	Erosions	42 (27.1%)	10 (21.2%)	Erosions	26 (32.1%)	3 (13%)
Male/Female	112 (55.4%) / 90 (44.6%)	Ulcers	18 (11.6%)	10 (21.2%)	Ulcers	5 (6.2%)	3 (13%)
OGIB type (Occult/Overt)	155 (76.7%) / 47 (23.3%)	Polyps	18 (11.6%)	4 (8.5%)	Polyps	11 (13.6%)	4 (17.4%)
Small intestinal transit	4H28m	Diverticulum	2 (1.3%)	2 (4.3%)	Petechiae	2 (2.5%)	1 (4.3%)
Examination complete	189 (93.6%)	Petechiae	8 (5.2%)	1 (2.1%)	Lymphagiectasia	1 (1.2%)	0 (0%)
Capsule retention	3 (1.4%)	Phlebectasia	2 (1.3%)	0 (0%)	Diverticulum	1 (1.2%)	1 (4.3%)
		Neoplasia	1 (0.6%)	0 (0%)	Phlebectasia	1 (1.2%)	0 (0%)
		Subepithelial lesion	1 (0.6%)	0 (0%)			

